

Table 1: THE HYPERVOLUME PERFORMANCE OF EACH SUBSET SELECTION METHOD ON EACH CANDIDATE SOLUTION SET. THE NUMBER OF SOLUTIONS IN EACH CANDIDATESOLUTION SET IS 10,000. THE NUMBER IN THE PARENTHESIS IS THE RANK OF THE CORRESPONDING METHOD AMONG THE 12 METHODS, WHERE A SMALLER VALUE INDICATES A BETTER RANK.

Candidate Solution Set	GHSS	GAHSS	GIGDSS	GIGD+SS	DSS	IDSS	CSS-MEA	CSS-MED	RVSS-PD	POHVSS	POIGDSS	POIGD+SS	
Linear Triangular	3	1.52E+0(1)	1.52E+0(3)	1.44E+0(9)	1.45E+0(8)	1.51E+0(4)	1.51E+0(5)	1.45E+0(6)	1.45E+0(7)	1.52E+0(2)	1.39E+0(10)	1.36E+0(12)	1.36E+0(11)
	5	2.45E+0(1)	2.45E+0(2)	2.24E+0(8)	2.18E+0(10)	2.45E+0(3)	2.42E+0(5)	2.27E+0(6)	2.24E+0(7)	2.44E+0(4)	2.22E+0(9)	2.12E+0(11)	2.09E+0(12)
	8	4.29E+0(1)	4.28E+0(2)	3.79E+0(9)	3.62E+0(12)	4.28E+0(3)	4.22E+0(5)	3.91E+0(7)	3.85E+0(8)	4.26E+0(4)	3.91E+0(6)	3.77E+0(10)	3.76E+0(11)
Linear Inverted Triangular	10	-(12)	6.18E+0(1)	5.74E+0(7)	5.58E+0(9)	6.17E+0(2)	6.12E+0(4)	5.96E+0(6)	5.96E+0(5)	6.17E+0(3)	5.64E+0(8)	5.36E+0(10)	5.26E+0(11)
	3	5.30E-1(1)	5.29E-1(2)	5.06E-1(8)	5.08E-1(7)	5.25E-1(3)	5.21E-1(4)	5.10E-1(6)	5.10E-1(5)	5.03E-1(9)	4.30E-1(10)	4.25E-1(12)	4.26E-1(11)
	5	9.02E-2(1)	8.95E-2(2)	7.92E-2(8)	8.04E-2(6)	8.83E-2(3)	8.50E-2(4)	8.02E-2(7)	8.07E-2(5)	7.89E-2(9)	4.74E-2(10)	4.32E-2(12)	4.57E-2(11)
Concave Triangular	8	1.91E-3(1)	1.87E-3(3)	1.57E-3(8)	1.66E-3(5)	1.88E-3(2)	1.82E-3(4)	1.61E-3(7)	1.62E-3(6)	1.19E-3(9)	8.26E-4(10)	7.50E-4(12)	7.88E-4(11)
	10	1.49E-4(1)	1.45E-4(3)	1.16E-4(8)	1.23E-4(5)	1.46E-4(2)	1.38E-4(4)	1.20E-4(7)	1.21E-4(6)	8.27E-5(9)	4.50E-5(10)	4.06E-5(12)	4.31E-5(11)
	3	1.15E+0(1)	1.15E+0(3)	1.05E+0(9)	1.15E+0(2)	1.14E+0(4)	1.13E+0(6)	1.05E+0(7)	1.05E+0(8)	1.14E+0(5)	9.81E-1(10)	9.15E-1(12)	9.44E-1(11)
Concave Inverted Triangular	5	2.18E+0(1)	2.17E+0(2)	1.69E+0(9)	2.15E+0(4)	2.14E+0(5)	2.03E+0(6)	1.73E+0(7)	1.71E+0(8)	2.15E+0(3)	1.49E+0(10)	1.34E+0(12)	1.44E+0(11)
	8	4.05E+0(1)	4.03E+0(2)	2.19E+0(10)	3.78E+0(5)	3.96E+0(4)	3.43E+0(6)	2.49E+0(7)	2.32E+0(8)	3.98E+0(3)	2.30E+0(9)	1.96E+0(12)	2.18E+0(11)
	10	-(12)	5.96E+0(1)	3.52E+0(8)	5.74E+0(4)	5.90E+0(3)	5.04E+0(5)	3.98E+0(6)	3.88E+0(7)	5.90E+0(2)	3.21E+0(9)	2.44E+0(11)	2.72E+0(10)
Convex Triangular	3	2.25E-1(1)	2.24E-1(2)	1.94E-1(9)	2.16E-1(4)	2.19E-1(3)	2.09E-1(6)	1.95E-1(8)	1.96E-1(7)	2.12E-1(5)	1.69E-1(10)	1.56E-1(12)	1.63E-1(11)
	5	1.88E-2(1)	1.86E-2(2)	1.17E-2(8)	1.77E-2(3)	1.75E-2(4)	1.40E-2(5)	1.33E-2(7)	1.37E-2(6)	9.64E-3(9)	6.87E-3(10)	6.08E-3(12)	6.59E-3(11)
	8	2.05E-4(1)	2.02E-4(2)	1.06E-4(8)	1.83E-4(4)	1.89E-4(3)	1.12E-4(7)	1.38E-4(6)	1.43E-4(5)	7.21E-5(9)	4.96E-5(10)	3.42E-5(12)	4.16E-5(11)
Convex Inverted Triangular	10	9.66E-6(1)	9.51E-6(2)	6.83E-6(7)	8.70E-6(4)	9.03E-6(3)	4.67E-6(8)	7.05E-6(6)	7.12E-6(5)	2.72E-6(9)	1.64E-6(10)	1.21E-6(12)	1.37E-6(11)
	3	1.71E+0(1)	1.71E+0(4)	1.71E+0(5)	1.69E+0(10)	1.71E+0(3)	1.71E+0(2)	1.71E+0(7)	1.71E+0(8)	1.71E+0(6)	1.69E+0(9)	1.69E+0(11)	1.68E+0(12)
	5	2.49E+0(1)	2.49E+0(7)	2.49E+0(8)	2.46E+0(12)	2.49E+0(2)	2.49E+0(3)	2.49E+0(6)	2.49E+0(5)	2.49E+0(4)	2.48E+0(9)	2.48E+0(10)	2.47E+0(11)
Avg Rank	8	4.30E+0(1)	4.30E+0(7)	4.30E+0(8)	4.28E+0(12)	4.30E+0(2)	4.30E+0(3)	4.30E+0(6)	4.30E+0(5)	4.30E+0(4)	4.30E+0(9)	4.29E+0(10)	4.28E+0(11)
	10	-(12)	6.19E+0(4)	6.19E+0(7)	6.19E+0(9)	6.19E+0(1)	6.19E+0(2)	6.19E+0(5)	6.19E+0(6)	6.19E+0(3)	6.19E+0(8)	6.19E+0(10)	6.17E+0(11)
	3	1.04E+0(1)	1.04E+0(6)	1.04E+0(5)	1.04E+0(4)	1.04E+0(8)	1.04E+0(7)	1.04E+0(3)	1.04E+0(2)	1.01E+0(9)	9.34E-1(10)	9.24E-1(11)	9.13E-1(12)
Avg Rank	5	5.00E-1(1)	4.90E-1(3)	4.88E-1(4)	4.93E-1(2)	4.68E-1(8)	4.73E-1(7)	4.85E-1(6)	4.87E-1(5)	3.87E-1(9)	3.26E-1(10)	2.98E-1(12)	3.03E-1(11)
	8	6.37E-2(1)	6.14E-2(3)	5.88E-2(4)	6.25E-2(2)	4.01E-2(8)	4.48E-2(7)	5.58E-2(6)	5.67E-2(5)	3.98E-2(9)	2.64E-2(10)	2.59E-2(11)	2.59E-2(12)
	10	1.44E-2(1)	1.40E-2(3)	1.28E-2(4)	1.41E-2(2)	7.97E-3(9)	9.20E-3(7)	1.20E-2(6)	1.23E-2(5)	9.19E-3(8)	3.95E-3(10)	3.66E-3(11)	3.62E-3(12)
Avg Rank		2.38	2.96	7.42	6.04	3.83	5.08	6.29	6.00	6.08	9.42	11.33	11.17

Table 2: THE IGD PERFORMANCE OF EACH SUBSET SELECTION METHOD ON EACH CANDIDATE SOLUTION SET. THE NUMBER OF SOLUTIONS IN EACH CANDIDATESOLUTION SET IS 10,000. THE NUMBER IN THE PARENTHESIS IS THE RANK OF THE CORRESPONDING METHOD AMONG THE 12 METHODS, WHERE A SMALLER VALUE INDICATES A BETTER RANK.

Candidate Solution Set	GHSS	GAHSS	GIGDSS	GIGD+SS	DSS	IDSS	CSS-MEA	CSS-MED	RVSS-PD	POHVSS	POIGDSS	POIGD+SS	
Linear Triangular	3	4.28E-2(8)	4.25E-2(7)	3.77E-2(3)	3.78E-2(4)	4.29E-2(9)	4.01E-2(5)	3.65E-2(2)	3.64E-2(1)	4.13E-2(6)	1.02E-1(12)	9.10E-2(11)	8.69E-2(10)
	5	1.04E-1(9)	9.78E-2(7)	8.20E-2(3)	8.22E-2(4)	9.56E-2(6)	9.09E-2(5)	8.13E-2(2)	8.00E-2(1)	9.83E-2(8)	1.83E-1(12)	1.69E-1(10)	1.73E-1(11)
	8	1.88E-1(9)	1.74E-1(8)	1.33E-1(2)	1.34E-1(4)	1.64E-1(7)	1.55E-1(5)	1.34E-1(3)	1.32E-1(1)	1.63E-1(6)	2.26E-1(12)	2.02E-1(10)	2.04E-1(11)
	10	-(12)	1.74E-1(8)	1.33E-1(2)	1.35E-1(3)	1.63E-1(6)	1.53E-1(5)	1.36E-1(4)	1.33E-1(1)	1.64E-1(7)	2.29E-1(11)	2.14E-1(9)	2.18E-1(10)
Linear Inverted Triangular	3	4.49E-2(8)	4.34E-2(7)	3.80E-2(4)	3.79E-2(3)	4.29E-2(6)	4.00E-2(5)	3.66E-2(2)	3.64E-2(1)	6.97E-2(9)	8.91E-2(11)	9.00E-2(12)	8.74E-2(10)
	5	1.02E-1(8)	9.99E-2(7)	8.15E-2(3)	8.27E-2(4)	9.37E-2(6)	9.06E-2(5)	8.10E-2(2)	7.98E-2(1)	1.26E-1(9)	1.66E-1(10)	1.76E-1(12)	1.68E-1(11)
	8	1.63E-1(7)	1.58E-1(6)	1.33E-1(2)	1.37E-1(4)	1.63E-1(8)	1.54E-1(5)	1.34E-1(3)	1.32E-1(1)	1.87E-1(9)	2.05E-1(10)	2.06E-1(12)	2.06E-1(11)
	10	1.64E-1(8)	1.60E-1(6)	1.33E-1(2)	1.37E-1(4)	1.64E-1(7)	1.53E-1(5)	1.36E-1(3)	1.33E-1(1)	1.78E-1(9)	2.14E-1(12)	2.11E-1(10)	2.12E-1(11)
Concave Triangular	3	7.36E-2(9)	6.45E-2(7)	5.07E-2(3)	6.62E-2(8)	5.53E-2(5)	5.33E-2(4)	4.92E-2(2)	4.90E-2(1)	5.74E-2(6)	1.32E-1(11)	1.20E-1(10)	1.34E-1(12)
	5	2.07E-1(9)	1.76E-1(7)	1.38E-1(3)	1.69E-1(6)	1.54E-1(5)	1.51E-1(4)	1.38E-1(2)	1.35E-1(1)	1.77E-1(8)	3.09E-1(12)	2.75E-1(10)	2.94E-1(11)
	8	3.88E-1(9)	3.66E-1(8)	2.76E-1(2)	3.20E-1(6)	3.19E-1(5)	3.08E-1(4)	2.78E-1(3)	2.73E-1(1)	3.61E-1(7)	4.53E-1(12)	4.06E-1(10)	4.10E-1(11)
	10	-(12)	3.93E-1(8)	3.06E-1(2)	3.46E-1(5)	3.49E-1(6)	3.38E-1(4)	3.13E-1(3)	3.04E-1(1)	3.90E-1(7)	4.95E-1(11)	4.67E-1(9)	4.73E-1(10)
Concave Inverted Triangular	3	3.61E-2(8)	3.45E-2(7)	2.47E-2(3)	3.03E-2(6)	2.80E-2(5)	2.65E-2(4)	2.40E-2(2)	2.39E-2(1)	6.79E-2(10)	7.28E-2(12)	5.99E-2(9)	6.95E-2(11)
	5	5.73E-2(8)	5.01E-2(7)	3.19E-2(3)	4.17E-2(6)	3.98E-2(5)	3.67E-2(4)	3.18E-2(2)	3.15E-2(1)	2.61E-1(12)	9.04E-2(11)	7.70E-2(9)	8.57E-2(10)
	8	8.56E-2(11)	7.23E-2(8)	3.72E-2(2)	5.45E-2(5)	5.49E-2(6)	4.66E-2(4)	3.74E-2(3)	3.70E-2(1)	5.10E-1(12)	7.74E-2(10)	6.89E-2(7)	7.36E-2(9)
	10	6.39E-2(9)	5.71E-2(7)	3.07E-2(2)	4.35E-2(5)	4.36E-2(6)	3.78E-2(4)	3.12E-2(3)	3.07E-2(1)	4.69E-1(12)	6.90E-2(11)	5.87E-2(8)	6.59E-2(10)
Convex Triangular	3	2.87E-2(6)	3.12E-2(8)	2.49E-2(3)	3.09E-2(7)	2.79E-2(5)	2.67E-2(4)	2.40E-2(2)	2.39E-2(1)	4.38E-2(9)	6.53E-2(11)	6.32E-2(10)	7.33E-2(12)
	5	3.75E-2(7)	3.56E-2(4)	3.18E-2(3)	3.71E-2(6)	3.95E-2(8)	3.65E-2(5)	3.17E-2(2)	3.14E-2(1)	4.84E-2(9)	8.73E-2(11)	8.00E-2(10)	9.13E-2(12)
	8	5.31E-2(8)	4.32E-2(5)	3.72E-2(2)	4.27E-2(4)	5.44E-2(9)	4.65E-2(6)	3.74E-2(3)	3.70E-2(1)	4.99E-2(7)	7.55E-2(11)	6.79E-2(10)	7.92E-2(12)
	10	-(12)	3.52E-2(4)	3.06E-2(1)	3.53E-2(5)	4.43E-2(8)	3.78E-2(6)	3.12E-2(3)	3.07E-2(2)	3.99E-2(7)	6.66E-2(10)	6.02E-2(9)	7.30E-2(11)
Convex Inverted Triangular	3	5.50E-2(7)	5.48E-2(6)	5.10E-2(3)	6.36E-2(8)	5.45E-2(5)	5.36E-2(4)	4.93E-2(2)	4.91E-2(1)	7.41E-2(9)	1.19E-1(11)	1.18E-1(10)	1.35E-1(12)
	5	1.51E-1(6)	1.47E-1(4)	1.38E-1(3)	1.59E-1(8)	1.52E-1(7)	1.51E-1(5)	1.38E-1(2)	1.35E-1(1)	1.98E-1(9)	2.64E-1(10)	2.75E-1(11)	2.88E-1(12)
	8	2.96E-1(5)	2.88E-1(4)	2.75E-1(2)	2.99E-1(6)	3.19E-1(8)	3.07E-1(7)	2.78E-1(3)	2.72E-1(1)	3.63E-1(9)	4.13E-1(11)	4.08E-1(10)	4.19E-1(12)
	10	3.26E-1(6)	3.21E-1(4)	3.05E-1(2)	3.23E-1(5)	3.47E-1(8)	3.38E-1(7)	3.11E-1(3)	3.03E-1(1)	3.88E-1(9)	4.65E-1(11)	4.64E-1(10)	4.77E-1(12)
Avg Rank	8.38	6.42	2.50	5.25	6.50	4.83	2.54	1.04	8.54	11.08	9.92	11.00	

Table 3: THE IGD+ PERFORMANCE OF EACH SUBSET SELECTION METHOD ON EACH CANDIDATE SOLUTION SET. THE NUMBER OF SOLUTIONS IN EACH CANDIDATESOLUTION SET IS 10,000. THE NUMBER IN THE PARENTHESIS IS THE RANK OF THE CORRESPONDING METHOD AMONG THE 12 METHODS, WHERE A SMALLER VALUE INDICATES A BETTER RANK.

Candidate Solution Set	GHSS	GAHSS	GIGDSS	GIGD+SS	DSS	IDSS	CSS-MEA	CSS-MED	RVSS-PD	POHVSS	POIGDSS	POIGD+SS
Linear Triangular	3 2.97E-2(9) 2.96E-2(7) 2.60E-2(4) 2.58E-2(3) 2.97E-2(8) 2.79E-2(5) 2.53E-2(2) 2.52E-2(1) 2.92E-2(6) 7.03E-2(12) 6.23E-2(11) 5.93E-2(10)	5 7.19E-2(9) 6.77E-2(7) 5.48E-2(4) 5.41E-2(2) 6.64E-2(6) 6.22E-2(5) 5.46E-2(3) 5.38E-2(1) 7.00E-2(8) 1.23E-1(12) 1.12E-1(10) 1.14E-1(11)	8 1.32E-1(9) 1.23E-1(8) 8.56E-2(2) 8.48E-2(1) 1.15E-1(7) 1.07E-1(5) 8.73E-2(4) 8.57E-2(3) 1.13E-1(6) 1.52E-1(12) 1.32E-1(11) 1.32E-1(10)	10 -12) 1.23E-1(8) 8.54E-2(2) 8.45E-2(1) 1.14E-1(7) 1.04E-1(5) 8.83E-2(4) 8.62E-2(3) 1.14E-1(6) 1.52E-1(11) 1.37E-1(9) 1.38E-1(10)								
	3 3.09E-2(8) 2.99E-2(7) 2.64E-2(4) 2.61E-2(3) 2.91E-2(6) 2.77E-2(5) 2.56E-2(2) 2.56E-2(1) 5.04E-2(9) 6.17E-2(11) 6.25E-2(12) 6.07E-2(10)	5 6.77E-2(8) 6.67E-2(7) 5.74E-2(4) 5.67E-2(2) 6.29E-2(6) 6.13E-2(5) 5.69E-2(3) 5.63E-2(1) 8.19E-2(9) 1.14E-1(10) 1.22E-1(12) 1.16E-1(11)	8 1.07E-1(7) 1.06E-1(6) 9.62E-2(4) 9.45E-2(1) 1.07E-1(8) 1.03E-1(5) 9.60E-2(3) 9.49E-2(2) 1.25E-1(9) 1.42E-1(10) 1.45E-1(12) 1.43E-1(11)	10 1.07E-1(8) 1.06E-1(6) 9.60E-2(3) 9.42E-2(1) 1.07E-1(7) 1.02E-1(5) 9.67E-2(4) 9.52E-2(2) 1.22E-1(9) 1.48E-1(11) 1.49E-1(12) 1.48E-1(10)								
	3 2.25E-2(2) 2.43E-2(3) 2.85E-2(9) 2.24E-2(1) 2.55E-2(4) 2.55E-2(5) 2.70E-2(8) 2.69E-2(7) 2.64E-2(6) 6.48E-2(10) 7.13E-2(12) 6.86E-2(11)	5 7.14E-2(2) 7.31E-2(3) 8.72E-2(9) 6.88E-2(1) 7.67E-2(4) 8.06E-2(6) 8.54E-2(8) 8.44E-2(7) 7.84E-2(5) 1.80E-1(11) 1.84E-1(12) 1.75E-1(10)	8 1.69E-1(3) 1.67E-1(2) 1.96E-1(9) 1.63E-1(1) 1.72E-1(5) 1.80E-1(6) 1.90E-1(8) 1.89E-1(7) 1.70E-1(4) 2.89E-1(12) 2.81E-1(11) 2.68E-1(10)	10 -12) 1.92E-1(2) 2.16E-1(8) 1.85E-1(1) 1.97E-1(4) 2.04E-1(5) 2.12E-1(7) 2.10E-1(6) 1.96E-1(3) 3.22E-1(10) 3.29E-1(11) 3.19E-1(9)								
	3 1.11E-2(5) 1.01E-2(2) 1.39E-2(8) 9.06E-3(1) 1.05E-2(3) 1.08E-2(4) 1.33E-2(7) 1.32E-2(6) 1.91E-2(9) 3.18E-2(10) 3.48E-2(12) 3.25E-2(11)	5 1.56E-2(3) 1.48E-2(2) 2.20E-2(8) 1.33E-2(1) 1.60E-2(4) 1.73E-2(5) 2.07E-2(7) 2.04E-2(6) 6.52E-2(12) 5.04E-2(10) 5.15E-2(11) 5.02E-2(9)	8 2.30E-2(4) 2.12E-2(2) 2.80E-2(8) 1.95E-2(1) 2.16E-2(3) 2.32E-2(5) 2.71E-2(7) 2.71E-2(6) 7.37E-2(12) 4.68E-2(10) 5.14E-2(11) 4.67E-2(9)	10 1.91E-2(4) 1.83E-2(2) 2.30E-2(8) 1.67E-2(1) 1.85E-2(3) 2.04E-2(5) 2.23E-2(7) 2.22E-2(6) 6.87E-2(12) 4.30E-2(9) 4.38E-2(11) 4.35E-2(10)								
Concave Inverted Triangular	3 1.14E-2(6) 1.10E-2(3) 1.13E-2(5) 9.50E-3(1) 1.49E-2(8) 1.34E-2(7) 1.11E-2(4) 1.10E-2(2) 2.03E-2(9) 3.09E-2(12) 3.02E-2(11) 2.73E-2(10)	5 1.87E-2(6) 1.53E-2(5) 1.36E-2(2) 1.13E-2(1) 2.43E-2(8) 2.07E-2(7) 1.44E-2(4) 1.42E-2(3) 2.51E-2(9) 4.37E-2(12) 3.75E-2(11) 3.32E-2(10)	8 2.85E-2(8) 2.14E-2(6) 1.56E-2(2) 1.28E-2(1) 3.31E-2(11) 2.95E-2(9) 1.65E-2(4) 1.61E-2(3) 1.68E-2(5) 3.73E-2(12) 3.15E-2(10) 2.72E-2(7)	10 -12) 1.76E-2(6) 1.30E-2(2) 1.11E-2(1) 2.29E-2(7) 2.36E-2(8) 1.41E-2(4) 1.36E-2(3) 1.42E-2(5) 3.40E-2(11) 2.62E-2(10) 2.38E-2(9)								
	3 2.57E-2(2) 2.71E-2(6) 2.67E-2(5) 2.37E-2(1) 2.95E-2(8) 2.87E-2(7) 2.64E-2(4) 2.62E-2(3) 4.21E-2(9) 6.04E-2(10) 6.49E-2(11) 6.64E-2(12)	5 7.26E-2(2) 7.78E-2(4) 7.75E-2(3) 6.84E-2(1) 9.14E-2(8) 8.95E-2(7) 7.91E-2(6) 7.82E-2(5) 1.37E-1(9) 1.46E-1(10) 1.62E-1(12) 1.57E-1(11)	8 1.48E-1(2) 1.53E-1(3) 1.59E-1(4) 1.45E-1(1) 2.14E-1(9) 2.01E-1(7) 1.67E-1(6) 1.64E-1(5) 2.10E-1(8) 2.45E-1(10) 2.45E-1(11) 2.45E-1(12)	10 1.68E-1(2) 1.72E-1(3) 1.79E-1(4) 1.65E-1(1) 2.33E-1(9) 2.21E-1(8) 1.88E-1(6) 1.84E-1(5) 2.15E-1(7) 2.81E-1(10) 2.88E-1(12) 2.86E-1(11)								
	Avg Rank											
		6.04	4.58	5.04	1.25	6.38	5.88	5.08	3.92	7.75	10.75	11.17

Table 4: THE RUNTIME PERFORMANCE OF EACH SUBSET SELECTION METHOD ON EACH CANDIDATE SOLUTION SET. THE NUMBER OF SOLUTIONS IN EACH CANDIDATESOLUTION SET IS 10,000. THE NUMBER IN THE PARENTHESIS IS THE RANK OF THE CORRESPONDING METHOD AMONG THE 12 METHODS, WHERE A SMALLER VALUE INDICATES A BETTER RANK.

Candidate Solution Set	GHSS	GAHSS	GIGDSS	GIGD+SS	DSS	IDSS	CSS-MEA	CSS-MED	RVSS-PD	POHVSS	POIGDSS	POIGD+SS
Linear Triangular	3 5.38E+0(6) 1.74E+0(5) 3.72E+1(8) 8.74E+1(12) 6.72E-1(4) 4.41E-1(2) 5.52E-1(3) 2.76E+1(7) 3.11E-2(1) 5.20E+1(11) 4.52E+1(9) 4.90E+1(10)	5 1.52E+1(6) 5.10E+0(5) 3.79E+1(7) 9.43E+1(12) 4.39E+0(4) 8.01E-1(2) 1.03E+0(3) 5.92E+1(11) 8.08E-2(1) 4.08E+1(8) 4.49E+1(9) 5.53E+1(10)	8 2.68E+2(12) 4.93E+0(5) 3.39E+1(6) 7.63E+1(11) 2.86E+0(4) 6.15E-1(2) 1.20E+0(3) 4.33E+1(8) 7.79E-2(1) 4.39E+1(9) 4.25E+1(7) 5.75E+1(10)	10 -(12) 7.82E+0(5) 3.76E+1(6) 7.50E+1(11) 7.48E+0(4) 1.23E+0(3) 1.05E+0(2) 4.48E+1(8) 6.15E-2(1) 4.67E+1(9) 3.99E+1(7) 5.98E+1(10)								
	3 4.19E+0(6) 1.69E+0(5) 3.69E+1(8) 9.08E+1(12) 6.79E-1(4) 4.38E-1(2) 5.77E-1(3) 2.95E+1(7) 3.02E-2(1) 4.87E+1(9) 5.52E+1(11) 5.44E+1(10)	5 8.61E+0(6) 6.43E+0(5) 3.74E+1(7) 1.17E+2(12) 4.00E+0(4) 7.92E-1(2) 1.18E+0(3) 6.06E+1(11) 7.75E-2(1) 4.08E+1(8) 5.26E+1(9) 5.29E+1(10)	8 3.33E+1(6) 5.08E+0(5) 3.57E+1(7) 1.19E+2(12) 2.58E+0(4) 6.19E-1(2) 1.10E+0(3) 4.21E+1(8) 9.37E-2(1) 4.85E+1(10) 4.73E+1(9) 5.90E+1(11)	10 6.24E+2(12) 9.90E+0(5) 3.82E+1(7) 1.33E+2(11) 8.55E+0(4) 1.25E+0(3) 1.16E+0(2) 4.61E+1(9) 5.23E-2(1) 4.43E+1(8) 3.16E+1(6) 5.17E+1(10)								
	3 5.31E+0(6) 1.68E+0(5) 3.74E+1(8) 1.02E+2(12) 6.51E-1(4) 4.40E-1(2) 6.19E-1(3) 2.39E+1(7) 5.32E-2(1) 4.26E+1(9) 5.23E+1(10) 5.73E+1(11)	5 9.51E+0(6) 4.46E+0(4) 4.08E+1(7) 1.24E+2(12) 4.80E+0(5) 7.94E-1(2) 1.23E+0(3) 5.96E+1(11) 1.01E-1(1) 4.88E+1(9) 4.80E+1(8) 5.04E+1(10)	8 1.33E+2(12) 4.94E+0(5) 3.92E+1(6) 1.15E+2(11) 2.43E+0(4) 6.24E-1(2) 1.04E+0(3) 4.58E+1(8) 7.03E-2(1) 5.03E+1(9) 4.40E+1(7) 5.25E+1(10)	10 -(12) 1.12E+1(5) 4.22E+1(7) 1.32E+2(11) 8.09E+0(4) 1.23E+0(3) 1.06E+0(2) 4.26E+1(8) 9.99E-2(1) 4.50E+1(9) 4.05E+1(6) 5.58E+1(10)								
	3 3.26E+0(6) 1.64E+0(5) 3.72E+1(8) 8.92E+1(12) 6.84E-1(4) 4.47E-1(2) 5.56E-1(3) 2.69E+1(7) 7.02E-2(1) 4.78E+1(10) 4.38E+1(9) 5.41E+1(11)	5 5.99E+0(6) 5.15E+0(5) 3.78E+1(7) 9.41E+1(12) 4.98E+0(4) 7.92E-1(2) 1.08E+0(3) 5.42E+1(11) 1.26E-1(1) 4.28E+1(8) 4.61E+1(9) 5.19E+1(10)	8 1.73E+1(6) 5.23E+0(5) 3.21E+1(7) 8.77E+1(12) 2.45E+0(4) 6.22E-1(2) 9.43E-1(3) 4.83E+1(9) 1.16E-1(1) 4.76E+1(8) 5.07E+1(10) 5.29E+1(11)	10 1.01E+3(12) 7.55E+0(4) 3.51E+1(6) 1.04E+2(11) 7.70E+0(5) 1.23E+0(3) 1.07E+0(2) 4.12E+1(8) 1.47E-1(1) 4.30E+1(9) 3.72E+1(7) 5.22E+1(10)								
Concave Inverted Triangular	3 5.64E+0(6) 1.67E+0(5) 3.66E+1(8) 7.85E+1(12) 6.52E-1(4) 4.35E-1(2) 6.11E-1(3) 2.53E+1(7) 2.80E-2(1) 4.21E+1(9) 5.26E+1(11) 4.90E+1(10)	5 1.85E+1(6) 5.56E+0(5) 3.73E+1(7) 6.75E+1(12) 4.64E+0(4) 7.83E-1(2) 1.09E+0(3) 6.28E+1(11) 6.22E-2(1) 5.08E+1(9) 4.22E+1(8) 5.59E+1(10)	8 6.63E+2(12) 5.04E+0(5) 3.26E+1(6) 5.21E+1(11) 2.53E+0(4) 6.26E-1(2) 9.81E-1(3) 4.04E+1(7) 8.03E-2(1) 4.05E+1(8) 4.80E+1(9) 4.81E+1(10)	10 -(12) 8.31E+0(5) 3.58E+1(7) 5.18E+1(10) 7.61E+0(4) 1.24E+0(3) 1.00E+0(2) 4.41E+1(8) 6.10E-2(1) 4.82E+1(9) 3.47E+1(6) 5.31E+1(11)								
	3 3.92E+0(6) 1.70E+0(5) 3.66E+1(8) 8.42E+1(12) 6.48E-1(4) 4.38E-1(2) 6.44E-1(3) 2.66E+1(7) 4.76E-2(1) 4.93E+1(9) 5.33E+1(10) 5.61E+1(11)	5 5.87E+0(6) 5.84E+0(5) 3.97E+1(8) 9.37E+1(12) 4.03E+0(4) 7.96E-1(2) 1.08E+0(3) 6.27E+1(11) 6.93E-2(1) 3.58E+1(7) 4.35E+1(9) 4.58E+1(10)	8 8.15E+0(6) 5.11E+0(5) 4.03E+1(7) 8.06E+1(12) 2.72E+0(4) 6.26E-1(2) 1.04E+0(3) 4.51E+1(8) 8.21E-2(1) 5.07E+1(11) 5.04E+1(10) 5.04E+1(9)	10 1.75E+2(12) 9.56E+0(5) 4.31E+1(8) 8.00E+1(11) 9.04E+0(4) 1.24E+0(3) 1.05E+0(2) 4.67E+1(9) 8.22E-2(1) 4.18E+1(7) 3.15E+1(6) 6.11E+1(10)								
	Avg Rank											
		8.25	4.92	7.12	11.58	4.08	2.25	2.75	8.58	1.00	8.83	8.42

Table 5: A SUMMARY OF THE RANK OF THE 12 SUBSET SELECTION METHODS WITH RESPECT TO DIFFERENT PERFORMANCE METRICS.

Performance Metric	GHSS	GAHSS	GIGDSS	GIGD+SS	DSS	IDSS	CSS-MEA	CSS-MED	RVSS-PD	POHVSS	POIGDSS	POIGD+SS
Hypervolume	2.38	2.96	7.42	6.04	3.83	5.08	6.29	6.00	6.08	9.42	11.33	11.17
IGD	8.38	6.42	2.50	5.25	6.50	4.83	2.54	1.04	8.54	11.08	9.92	11.00
IGD+	6.04	4.58	5.04	1.25	6.38	5.88	5.08	3.92	7.75	10.75	11.17	10.17
Runtime	8.25	4.92	7.12	11.58	4.08	2.25	2.75	8.58	1.00	8.83	8.42	10.21